



SEQUENCE LISTING

a' <110> Yoon, Kyonggeun

<120> Novel Gene Therapy Methods For The Treatment of Skin Disorders

<130> JEFF-YOO01

<140> 09/473,872

<141> 1999-12-28

<160> 68

<170> PatentIn Ver. 2.1

<210> 1

<211> 16

<212> PRT

<213> Artificial Sequence

<220>

<223> Description of Artificial Sequence: Mouse tyrosinase polypeptide fragment

<400> 1

Phe Met Gly Phe Asn Cys Gly Asn Ser Lys Phe Gly Phe Gly Gly Pro
1 5 10 15

<210> 2

<211> 48

<212> DNA

<213> Artificial Sequence

<220>

<223> Description of Artificial Sequence: Mouse tyrosinase gene fragment

<400> 2

ttcatggggtt tcaactgcgg aaactctaag tttggatttg ggggccca

48

<210> 3

<211> 48

<212> DNA
 <213> Artificial Sequence

<220>

<223> Description of Artificial Sequence: Mouse
 tyrosinase gene fragmet

<220>

<400> 3
 aagtacccaa agttgacgcc tttagattc aaacctaaac ccccggt

48

<210> 4
 <211> 68
 <212> DNA
 <213> Artificial Sequence

<220>

<223> Description of Artificial Sequence: Chimeric
 oligonucleotide

<400> 4
 actgcggaaa ctgtaagttt ggatttttta auccaaacut acaguuuccg cagugcgcgt 60
 tttcgcgc

68

<210> 5
 <211> 16
 <212> PRT
 <213> Artificial Sequence

<220>

<223> Description of Artificial Sequence: Mouse
 tyrosinase polypeptide fragment

<400> 5
 Phe Met Gly Phe Asn Cys Gly Asn Cys Lys Phe Gly Phe Gly Gly Pro
 1 5 10 15

<210> 6
 <211> 48
 <212> DNA

<213> Artificial Sequence

<220>

<223> Description of Artificial Sequence: Mouse
tyrosinase gene fragment

<400> 6

ttcatggggtt tcaactgcgg aaactgtaag tttggatttg ggggccca

48

<210> 7

<211> 48

<212> DNA

<213> Artificial Sequence

<220>

<223> Description of Artificial Sequence: Mouse
tyrosinase gene fragment

<400> 7

aagtacccaa agttgacgcc tttgacattc aaacctaaac ccccggt

48

<210> 8

<211> 68

<212> DNA

<213> Artificial Sequence

<220>

<223> Description of Artificial Sequence: Chimeric
oligonucleotide

<400> 8

actgcggaaa ctctaagttt ggatttttta auccaaacut agaguuccg cagugcgcgt 60

tttcgcgc

68

<210> 9

<211> 19

<212> DNA

<213> Artificial Sequence

<220>

<223> Description of Artificial Sequence: Primer

<400> 9

aagaatgctg cccaccatg

19

<210> 10

<211> 26

<212> DNA

<213> Artificial Sequence

<220>

<223> Description of Artificial Sequence: Primer

<400> 10

gacatagact gagctgatag tatgtt

26

<210> 11

<211> 52

<212> DNA

<213> Artificial Sequence

<220>

<223> Description of Artificial Sequence: Mouse DSG3
gene fragment

<400> 11

attccactgg agggaccttg aaggacttat gctgcgccag tcaacatgac tt

52

<210> 12

<211> 78

<212> DNA

<213> Artificial Sequence

<220>

<223> Description of Combined DNA/RNA Molecule:
Chimeric oligonucleotide

<220>

<223> Description of Artificial Sequence: Chimeric
oligonucleotide

<400> 12

gggaccttga aggactatgc tgcgccagtc ttttgacugg cgcagcatag tccuucagg 60

ucccgcgcggt tttcgcg

78

<210> 13

<211> 52

<212> DNA

<213> Artificial Sequence

<220>

<223> Description of Artificial Sequence: Mouse DSG3
gene fragment

<400> 13

taaggtgacc tccctggaac ttctgaata cgacgcggtc agttgtactg aa

52

<210> 14

<211> 79

<212> DNA

<213> Artificial Sequence

<220>

<223> Description of Combined DNA/RNA Molecule:
Chimeric oligonucleotide

<220>

<223> Description of Artificial Sequence: Chimeric
oligonucleotide

<400> 14

gggaccttga aggactatgc tgcgccagtc ttttgacugg cgcagcauaa guccuucagg 60

gucccgcgcg ttttcg

79

<210> 15

<211> 79

<212> DNA

<213> Artificial Sequence

<220>

<223> Description of Combined DNA/RNA Molecule:
Chimeric oligonucleotide

<220>

<223> Description of Artificial Sequence: Chimeric
oligonucleotide

<400> 15

gggaccttga aggacttatg ctgcgccagt cttttgacug ggcgagcaua guccuucag 60

gucccgcgcg ttttcgcg

79

<210> 16

<211> 39

<212> DNA

<213> Artificial Sequence

<220>

<223> Description of Artificial Sequence: COL7A1 gene
fragment from a normal human

<400> 16

agccaatcct tgagagtaca gtggacagcg gccagtggc

39

<210> 17

<211> 39

<212> DNA

<213> Artificial Sequence

<220>

<223> Description of Artificial Sequence: COL7A1 gene
fragment from a normal human

<400> 17

tcggttagga actctcatgt cacctgtcgc cggtcaccg

39

<210> 18

<211> 13

<212> PRT

<213> Artificial Sequence

<220>

<223> Description of Artificial Sequence: COL7A1
polypeptide fragment from a normal human

<400> 18

Ser Gln Ser Leu Arg Val Gln Met Thr Ala Ala Ser Gly
1 5 10

<210> 19

<211> 39

<212> DNA

<213> Artificial Sequence

<220>

<223> Description of Artificial Sequence: COL7A1 gene
fragment from a human with dystrophic EB

<400> 19

agccaatcct tgagagtata gtggacagcg gccagtggc

39

<210> 20

<211> 39

<212> DNA

<213> Artificial Sequence

<220>

<223> Description of Artificial Sequence: COL7A1 gene
fragment from a human with dystrophic EB

<400> 20

tcggttagga actctcatat cacctgtcgc cggtcaccg

39

<210> 21

<211> 68

<212> DNA

<213> Artificial Sequence

<220>

<223> Description of Combined DNA/RNA Molecule:
Chimeric oligonucleotide

<220>

<223> Description of Artificial Sequence: Chimeric
oligonucleotide

<400> 21

tccttgagag tacagtggac agcgggttttc cgcuguccac tgtacucuca aggagcgcgt 60

tttcgcgc

68

<210> 22

<211> 68

<212> DNA

<213> Artificial Sequence

<220>

<223> Description of Combined DNA/RNA Molecule:
Chimeric oligonucleotide

<220>

<223> Description of Artificial Sequence: Chimeric
oligonucleotide

<400> 22

tccttgagag taaagtggac agcgggttttc cgcuguccac tttacucuca aggagcgcgt 60

tttcgcgc

68

<210> 23

<211> 39

<212> DNA

<213> Artificial Sequence

<220>

<223> Description of Artificial Sequence: COL7A1 gene
fragment from a normal human

<400> 23

ggggagcctg gaaagcctgg tattccccggg ctcccaggc

39

<210> 24

<211> 39

<212> DNA

<213> Artificial Sequence

<220>

<223> Description of Artificial Sequence: COL7A1 gene
fragment from a normal human

<400> 24

cccctcggac ctttcggacc ataagggccc gaggggtccg

39

<210> 25

<211> 14

<212> PRT

<213> Artificial Sequence

<220>

<223> Description of Artificial Sequence: COL7A1
polypeptide fragment from a normal human

<400> 25

Gly Glu Pro Gly Lys Pro Gly Ile Pro Gly Leu Pro Gly Gly
1 5 10

<210> 26

<211> 39

<212> DNA

<213> Artificial Sequence

<220>

<223> Description of Artificial Sequence: COL7A1 gene
fragment from a human with dominant negative EB

<400> 26

ggggagcctg gaaagcctag tattcccggg ctcccaggc

39

<210> 27

<211> 39

<212> DNA

<213> Artificial Sequence

<220>

<223> Description of Artificial Sequence: COL7A1 gene
fragment from a human with dominant negative EB

<400> 27

cccctcggac ctttcggatc ataagggccc gaggggtccg

39

<210> 28

<211> 68

<212> DNA

<213> Artificial Sequence

<220>

<223> Description of Combined DNA/RNA Molecule:
Chimeric oligonucleotide

<220>

<223> Description of Artificial Sequence: Chimeric
oligonucleotide

<400> 28

cctggaaagc ctagtattcc cgggcttttg cccgggaaua ctaggcuuuc cagggcgcggt 60

tttcgcgc

68

<210> 29

<211> 68

<212> DNA

<213> Artificial Sequence

<220>

<223> Description of Combined DNA/RNA Molecule:
Chimeric oligonucleotide

<220>

<223> Description of Artificial Sequence: Chimeric
oligonucleotide

<400> 29

cctggaaagc ctagtattcc cgggcttttg cccgggaaua ctaggcuuuc cagggcgcggt 60

tttcgcgc

68

<210> 30

<211> 39
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: COL7A1 gene
fragment from a normal human

<400> 30
cctggtcccc cagggcctcg agggcccccg ggtgtctca

39

<210> 31
<211> 39
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: COL7A1 gene
fragment from a normal human

<400> 31
ggaccagggg gtcccggagc tcccgggggc ccacagagt

39

<210> 32
<211> 39
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: COL7A1 gene
fragment from a human with junctional EB

<400> 32
cctggtcccc cagggccttg agggcccccg ggtgtctca

39

<210> 33
<211> 39
<212> DNA
<213> Artificial Sequence

<220>

<223> Description of Artificial Sequence: COL7A1 gene
fragment from a human with junctional EB

<400> 33

ggaccagggg gtcccggaac tcccgggggc ccacagagt

39

<210> 34

<211> 68

<212> DNA

<213> Artificial Sequence

<220>

<223> Description of Artificial Sequence: Chimeric
oligonucleotide

<400> 34

ccccagggc ctcgagggcc cccggttttc cgggggccct cgaggcccug gggggcgcgt 60

tttcgcgc

68

<210> 35

<211> 68

<212> DNA

<213> Artificial Sequence

<220>

<223> Description of Combined DNA/RNA Molecule:
Chimeric oligonucleotide

<220>

<223> Description of Artificial Sequence: Chimeric
oligonucleotide

<400> 35

ccccagggc cttgagggcc cccggttttc cgggggccct caaggcccug gggggcgcgt 60

tttcgcgc

68

<210> 36

<211> 39

<212> DNA

<213> Artificial Sequence

<220>

<223> Description of Artificial Sequence: Human KRT14
gene fragment

<400> 36

atgcagaacc tcaatgaccg cctggcctcc tacctggac

39

<210> 37

<211> 39

<212> DNA

<213> Artificial Sequence

<220>

<223> Description of Artificial Sequence: Human KRT14
gene fragment

<400> 37

tacgtcttgg agttactggc ggaccggagg atggacctg

39

<210> 38

<211> 68

<212> DNA

<213> Artificial Sequence

<220>

<223> Description of Combined DNA/RNA Molecule:
Chimeric oligonucleotide

<220>

<223> Description of Artificial Sequence: Chimeric
oligonucleotide

<400> 38

acctcaatga cccctggcc tcctattttu aggaggccag gcggucauug aggutctgct 60

tttgcaga

68

<210> 39

<211> 68

<212> DNA

<213> Artificial Sequence

<220>

<223> Description of Combined DNA/RNA Molecule:
Chimeric oligonucleotide

<220>

<223> Description of Artificial Sequence: Chimeric
oligonucleotide

<400> 39

acctcaatga cccctggcc tcctauuuu aggaggccag gcggucauug aggutctgcu 60

uuugcaga

68

<210> 40

<211> 68

<212> DNA

<213> Artificial Sequence

<220>

<223> Description of Combined DNA/RNA Molecule:
Chimeric oligonucleotide

<220>

<223> Description of Artificial Sequence: Chimeric
oligonucleotide

<400> 40

acctcaatga ccgcctggcc tcctattttu aggaggccag ggggucauug aggutctgct 60

tttgcaga

68

<210> 41

<211> 68

<212> DNA

<213> Artificial Sequence

<220>

<223> Description of Combined DNA/RNA Molecule:
Chimeric oligonucleotide

<220>

<223> Description of Artificial Sequence: Chimeric
oligonucleotide

<400> 41

acctcaatga ccgcctggcc tcctauuuuu aggaggccag ggggucauug aggutctgcu 60

uuugcaga

68

<210> 42

<211> 33

<212> DNA

<213> Artificial Sequence

<220>

<223> Description of Artificial Sequence: IL-1Beta gene
fragment

<400> 42

tctgaagcag ccatggcaga agtacctgag ctc

33

<210> 43

<211> 33

<212> DNA

<213> Artificial Sequence

<220>

<223> Description of Artificial Sequence: IL-1Beta
gene fragment

<400> 43

agacttcgtc ggtaccgtct tcatggactc gag

33

<210> 44

<211> 68

<212> DNA

<213> Artificial Sequence

<220>

<223> Description of Combined DNA/RNA Molecule:
Chimeric oligonucleotide

<220>

<223> Description of Artificial Sequence: Chimeric
oligonucleotide

<400> 44

gcagccatgg cataagtacc tgagcttttg cucagguact tatgccaugg cugccgcgct 60
tttgcgcg

68

<210> 45

<211> 41

<212> DNA

<213> Artificial Sequence

<220>

<223> Description of Artificial Sequence: IL-1Beta
gene fragment

<400> 45

gaaatgatgg cttattacag gtcagtggag acgctgagac c

41

<210> 46

<211> 41

<212> DNA

<213> Artificial Sequence

<220>

<223> Description of Artificial Sequence: IL-1Beta
gene fragment

<400> 46

ctttactacc gaataaggtc cagtcacctc tgcgactctg g

41

<210> 47

<211> 68

<212> DNA

<213> Artificial Sequence

<220>

<223> Description of Combined DNA/RNA Molecule:

Chimeric oligonucleotide

<220>

<223> Description of Artificial Sequence: Chimeric
oligonucleotide

<400> 47

ggcttattac agttcagtgg agacgttttc gucuccacug aactguaaua agcccgcgct 60
tttgcgcg

68

<210> 48

<211> 14

<212> PRT

<213> Artificial Sequence

<220>

<223> Description of Artificial Sequence: IL-1Beta
polypeptide fragment

<400> 48

Arg Ser Leu Asn Cys Thr Leu Arg Asp Ser Gln Gln Lys Ser
1 5 10

<210> 49

<211> 42

<212> DNA

<213> Artificial Sequence

<220>

<223> Description of Artificial Sequence: IL-1Beta
gene fragment

<400> 49

cgatcactga actgcacgct ccgggactca cagcaaaaaa gc

42

<210> 50

<211> 42

<212> DNA

<213> Artificial Sequence

<220>

<223> Description of Artificial Sequence: IL-1Beta
gene fragment

<400> 50

gctagtcact tgacgtgcga ggccctgagt gtcgtttttt cg

42

<210> 51

<211> 68

<212> DNA

<213> Artificial Sequence

<220>

<223> Description of Combined DNA/RNA Molecule:
Chimeric oligonucleotide

<220>

<223> Description of Artificial Sequence: Chimeric
oligonucleotide

<400> 51

aactgcacgc tcggggactc acagcttttg cugugagucc ccgagcgugc aguucgcgct 60

tttgcgcg

68

<210> 52

<211> 39

<212> DNA

<213> Artificial Sequence

<220>

<223> Description of Artificial Sequence: TNFalpha gene
fragment

<400> 52

gaggaggcgc tccccaagaa gacagggggg ccccagggc

39

<210> 53

<211> 39

<212> DNA

<213> Artificial Sequence

<220>

<223> Description of Artificial Sequence: TNFalpha gene
fragment

<400> 53

ctcctccgcg aggggttctt ctgtccccc ggggtcccg

39

<210> 54

<211> 68

<212> DNA

<213> Artificial Sequence

<220>

<223> Description of Combined DNA/RNA Molecule:
Chimeric oligonucleotide

<220>

<223> Description of Artificial Sequence: Chimeric
oligonucleotide

<400> 54

gcgctcccca agtagacagg ggggcttttg cccccuguc tactugggga gcgcgcgcgt 60

tttcgcgc

68

<210> 55

<211> 42

<212> DNA

<213> Artificial Sequence

<220>

<223> Description of Artificial Sequence: IL-1alpha
gene fragment

<400> 55

tgtgaccac aactatcatg gtcattaaag tacattggcc ag

42

<210> 56

<211> 42

<212> DNA

<213> Artificial Sequence

<220>

<223> Description of Artificial Sequence: IL-1alpha
gene fragment

<400> 56

acactgggtg ttgatagtac cagtaatttc atgtaaccgg tc

42

<210> 57

<211> 68

<212> DNA

<213> Artificial Sequence

<220>

<223> Description of Combined DNA/RNA Molecule:
Chimeric oligonucleotide

<220>

<223> Description of Artificial Sequence: Chimeric
oligonucleotide

<400> 57

cacaactatc atagtcatta aagtattttu acuuuaauga ctatgauagu uguggcgcgt 60

tttcgcgc

68

<210> 58

<211> 39

<212> DNA

<213> Artificial Sequence

<220>

<223> Description of Artificial Sequence: Mouse KRT17
gene fragment

<400> 58

atgcagaacc tcaatgaccg cctggcctcc tacctggac

39

<210> 59

<211> 39

<212> DNA

<213> Artificial Sequence

<220>

<223> Description of Artificial Sequence: Mouse KRT17
gene fragment

<400> 59

tacgtcttgg agttactggc ggaccggagg atggacctg

39

<210> 60

<211> 68

<212> DNA

<213> Artificial Sequence

<220>

<223> Description of Combined DNA/RNA Molecule:
Chimeric oligonucleotide

<220>

<223> Description of Artificial Sequence: Chimeric
oligonucleotide

<400> 60

acctcaatga ccccttgcc tcctattttu aggaggccag gcggucaug aggutctgct 60

tttgcaga

68

<210> 61

<211> 68

<212> DNA

<213> Artificial Sequence

<220>

<223> Description of Combined DNA/RNA Molecule:
Chimeric oligonucleotide

<220>

<223> Description of Artificial Sequence: Chimeric
oligonucleotide

<400> 61

acctcaatga ccccttgcc tcctauuuuu aggaggccag gcggucaug aggutctgct 60

tttgcaga

68

<210> 62

<211> 45

<212> DNA

<213> Artificial Sequence

<220>

<223> Description of Artificial Sequence: COL7A1 gene
fragment

<400> 62

gcgggggaac ccggaagcc tggcattcct ggactcccag gccgg

45

<210> 63

<211> 45

<212> DNA

<213> Artificial Sequence

<220>

<223> Description of Artificial Sequence: COL7A1 gene
fragment

<400> 63

cgcccccttg ggcctttcgg accgtaagga cctgagggtc cggcc

45

<210> 64

<211> 68

<212> DNA

<213> Artificial Sequence

<220>

<223> Description of Artificial Sequence: Chimeric
oligonucleotide

<400> 64

cccggaaagc ctagcattcc tggacttttg uccaggaaug ccaggcuuuc cgggttcct 60

tttgggaa

68

<210> 65
<211> 68
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Combined DNA/RNA Molecule:
Chimeric oligonucleotide

<220>
<223> Description of Artificial Sequence: Chimeric
oligonucleotide

<400> 65
cccggaaagc ctagcattcc tggacuuuug uccaggaaug ccaggcuuuc cgggttcccu 60
uuugggaa 68

<210> 66
<211> 68
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Combined DNA/RNA Molecule:
Chimeric oligonucleotide

<220>
<223> Description of Artificial Sequence: Chimeric
oligonucleotide

<400> 66
cccggaaagc ctggcattcc tggacttttg uccaggaaug cuaggcuuuc cgggttcctt 60
tttgggaa 68

<210> 67
<211> 68
<212> DNA
<213> Artificial Sequence

<220>

<223> Description of Combined DNA/RNA Molecule:
Chimeric oligonucleotide

<220>

<223> Description of Artificial Sequence: Chimeric
oligonucleotide

<400> 67

cccggaaagc ctggcattcc tggacuuuug uccaggaug cuaggcuuuc cgggttcccu 60

uuugggaa

68

<210> 68

<211> 19

<212> DNA

<213> Artificial Sequence

<220>

<223> Description of Artificial Sequence: Primer

<400> 68

aagaatgctg cccaccatg

19